

Remarks

The application has been reviewed in light of the Official Action mailed August 2, 2005. Claims 1, 2, 6, 12, 13, 18 and 20 have been amended. Claim 8 has been cancelled. Claims 1-7 and 9-20 are pending in the application.

No new matter is introduced by the amendments. The amendments correspond to the matter disclosed in p. 5 l. 14-22, p. 12 l. 6-16 and p. 15 l. 1-5.

The Examiner rejected claims 6-8 and 18-20 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claims 6, 18 and 20 to address the Examiner's rejection. Applicant has cancelled claim 8.

The Examiner rejected claims 1-11 under 35 U.S.C. 112, first paragraph, for lack of enablement. Applicant has amended the step in claim 1 from "comparing" to "examining." This step is supported by p. 12 l. 6-16.

The Examiner rejected claims 13-16 under 35 U.S.C. 103(a) as being unpatentable over Lord (US 6455851). The Examiner rejected claims 1-10 and 12-19 under 35 U.S.C. 103(a) as being unpatentable over Jack (US 5719396). As amended, Applicant respectfully submits that method claims 1-7 and 9-11 are allowable over these references because all method claims comprise the steps of detecting the rate of change of particulate emissions in the atmosphere above a vehicle at the first and second detection stations and observing video information to determine whether a continuous particulate emission has occurred. Similarly, Applicant respectfully submits that as amended apparatus claim 12 is allowable over these references because this claim comprises first and second detection means that detect the rate of change of particulate emissions in the atmosphere above a vehicle and recording means to visually re-

cord the particulate emissions over an extended time period. Finally, Applicant respectfully submits that as amended system claims 13-20 are allowable over these references because these claims comprise a first detection system that detects the rate of change of particulate emissions in the atmosphere above a vehicle and a first imaging means for visually recording the particulate emissions over an extended time period.

Lord discloses a method and system that detects and measures emissions with IR 10 and UV 12 radiation beams and video camera 26 that images a vehicle's license plate. col. 4 l. 27-38. The method and system in Lord detects emissions and determines a violation solely with IR and UV radiation. col. 5 l. 1-11. Further the IR and UV radiation determine a violation by measuring "the concentration of multiple gaseous and particle components of the exhaust plume 20 emitted by moving vehicle 22." *Id.* Similarly, Jack discloses a method and system that detects and measures emissions with electromagnetic radiation through a first 22 and second 32 monitoring stations. col. 5 l. 29-45. Video cameras 42 and 44 are used to image the vehicle, and license place reader 46 is used to identify the license plate. col. 5 l. 46-52. Like Lord, this method and system determines a violation by measuring the emission concentration from the exhaust plume of the vehicle. col.5-6 l. 64-8.

These references do not anticipate method claims 1-7 and 9-11, as amended, because the method for determining a violation includes the steps of detecting the rate of change of particulate emissions in the atmosphere above a vehicle and observing video information to determine whether a continuous particulate emission has occurred. Lord and Jack solely disclose a method that determines a violation by measuring the concentration of a vehicles exhaust plume and then records an image of the vehicle for identification. The measurement in Lord and Jack is directed to determining the actual concentration of the exhaust for an individual vehicle. The observation in Lord and Jack is directed to identifying the vehicle. Since the method in Lord and Jack is directed to measuring the actual concentration of an exhaust plume and imaging the vehicle, and

not measuring a rate of change in emissions in the atmosphere above a vehicle and observing video of particulate emissions, it is respectfully submitted that Lord and Jack do not anticipate the claimed method as amended.

Similarly, these references do not anticipate apparatus claim 12, as amended, because the apparatus for determining a violation includes a first and second detection means that detect the rate of change of particulate emissions in the atmosphere above a vehicle and a recording means that visually records the particulate emissions over an extended time period. Lord and Jack solely disclose an apparatus that determines a violation by measuring the concentration of the exhaust plume for an individual vehicle. Lord and Jack incorporate video cameras that image the vehicle, but don't image the exhaust plume. As a result, it is respectfully submitted that Lord and Jack do not anticipate the apparatus claim 12.

Also, these references do not anticipate system claims 13-20, as amended, because the system includes a first particulate detection system that detects a rate of change of particulate emission in the atmosphere above a vehicle and a first imaging means that visually records the particulate emissions of the vehicle for an extended time period. As mentioned with the apparatus claim, Lord and Jack solely disclose an apparatus that utilizes radiation to measure the concentration of the exhaust plume and determine a violation of an individual vehicle. Lord and Jack incorporate video cameras that image the vehicle, but don't visually record the exhaust plume. As a result, it is respectfully submitted that Lord and Jack do not anticipate the system claims 13-20.

Further, it is respectfully submitted that there is no suggestion or motivation to modify or combine these references in accordance with the claimed invention.

First, these references do not provide any suggestion or motivation to modify these references in accordance with the claimed invention. The objective of Lord and Jack is to accurately measure the concentration of an individual vehicle's emissions plume with radiation. To do so, they disclose transmitting radiation through an individ-

ual vehicle's exhaust plume. The claimed method, apparatus and system are directed to identifying the presence of a potential offender. This is accomplished by utilizing a detector that measures the general atmosphere, not a particular exhaust plume, for a rate of change in emissions, producing a video of a vehicle's transit through two points and presenting the video to a human adjudicator. Since Lord and Jack are directed to accurately measuring and identifying a violator through radiation detection, one skilled in the art would not be motivated by the references to create a system that utilized a detector to alert to the presence of a potential violator and video to adjudicate an actual violation. Similarly, by measuring the general atmosphere and not the emissions of a particular vehicle, the detector is able to identify the presence of a potential violator and present video demonstrating that there are in fact two violators moving side by side. Since Lord and Jack are directed to measuring the exhaust plume of an individual vehicle, they would not motivate one skilled in the art to modify those systems to facilitate the identification of more than one violator. Thus, Lord and Jack would not suggest or motivate one skilled in the art to modify their systems to utilize detectors that monitor a change in emissions rates in the atmosphere above the vehicle or video cameras that observe the exhaust plume.

Second, combining Lord and Jack would not yield the claimed method, apparatus or system. As mentioned before, Lord and Jack utilize radiation to measure the concentration of the exhaust and identify a violation, and video to image the vehicle. Since neither reference incorporates a detector that measures the rate of change of emissions in the atmosphere or a video that images an exhaust plume, combining the references would not yield the claimed invention.

Third, even if these references were to be combined, they still would not arrive at the claimed invention. Lord measures the concentration of a plume by transmitting multiple radiation paths through an exhaust plume to be received a detector. Jack utilizes two detecting stations to measure an exhaust plume. Both utilize video to image

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and identify a vehicle. Applying Lord to Jack would yield a limited detecting system that transmitted radiation from a source to a detector and measured the concentration of the exhaust. Applying Jack to Lord would yield two detection stations that transmitted radiation over multiple paths through the exhaust and measured the concentration of the exhaust. However, the combination would not incorporate a detector that measured a rate of change of exhaust in the atmosphere and imaged the exhaust of the vehicle with video.

In view of the foregoing amendments and remarks, it is respectfully submitted that all of the claims currently pending in the application are now in condition for allowance. Reconsideration and notice to that effect is earnestly requested.

Respectfully submitted,



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